CASE OF RUPTURE OF QUADRICEPS FEMORIS TENDON WITH DISLOCATION OF PATELLA BENEATH THE INTERCONDYLOID GROOVE OF THE FEMUR.

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THE PATIENT, a strong muscular youth, æt. 19 years, while attempting to board a moving railroad train, May 23, 1889, fell and dislocated the left patella. The bone was completely torn loose from its attachment above and turned on its lateral axis $\frac{3}{8}$ of a circle, its longitudinal axis forming an angle of about 45° with the tibia. A few hours after the accident the patient was chloroformed, and strenuous efforts made by Dr. E. S. Rodgers and J. S. Carriger of Knoxville, and Drs. Shields and Gamble, of Concord, to force the patella back into position. The day after the accident Drs. E. S. Rogers, Shields and myself chloroformed the patient again, (the parts being very much swollen and very sore) and worked hard for more than an hour. We inserted a four pronged steel hook through the soft parts and into the bone, and pulled with great force. We flexed the leg to various angles, but the patella seemed riveted in the subcondyloid fossa, and we were compelled to score another failure.

I then had a small windlass made, consisting of a half inch iron rod with a long crank at one end, thimbled or socketed on two iron posts, an inch high; these posts were bolted to an oak board, one inch thick, six inches wide and four feet long.

The windlass was placed under the leg, a cotton cord $\frac{1}{4}$ of an inch in diameter was attached to the spindle and thrown around the elevated edge of the patella and the leg held extended. The line of tension on the cord formed an angle of about thirty degrees with the femur. I think with this little machine, one man could exert force enough to lift an ox, and although the power we used was sufficient to have raised several hundred pounds, the direction of the force deviated so much

from the axis of the thigh that the patella would not make the turn. We removed the cord, I grasped the lateral edges of the patella with my lett hand, drew it upward or away from the joint, pulled on the upper edge of the bone with my right hand in the direction of the axis of the thigh, when with a sudden jerk the patella turned and fell into its normal position. We had repeatedly tried this same manipulation without effect, but the force we had exerted on the cord had evidently stretched the ligaments so that we were enabled to partially lift the bone out of the subcondyloid fossa.

This particular kind of dislocation of the patella must be exceedingly rare and I have not been able, so far, to find any description of downward dislocation of any kind. The International Encyclopædia of Surgery, Holmes, Bryant, Erichsen and others, do not mention its occurrence, while Gross, in his System of Surgery, says, "displacement downwards is altogether impracticable."